INT. BUR.
-1 OCT. 1926
ENTOM.

S. R. A.—Fed. Hort. Bd. 61. Issued May 5, 1919.

U. S. DEPARTMENT OF AGRICULTURE,

FEDERAL HORTICULTURAL BOARD.

C. L. MARLATT, *Chairman;* W. A. ORTON, GEO. B SUDWORTH, W. D. HUNTER, KARL F. KELLERMAN. R. C. ALTHOUSE, *Secretary.*

SERVICE AND REGULATORY ANNOUNCEMENTS.

MARCH, 1919.

CONTENTS.

	Page.
General notes—	
The pink bollworm work	29
Regulated cotton zones Nos. 2 and 3	30
European corn-borer quarantine withheld	31
Port inspection at New Orleans definitely established	32
Inspection of plant introduction gardens	32
Sterilization requirements of earth used for packing flower bulbs	32
Amendment No. 2 to regulations supplemental to Notice of Quarantine No. 37	33
Quarantine No. 37	34
Restrictions on mailing of corn and corn plants in Massachusetts	34
(circular letter)	35
Can not trust to foreign inspection of nursery stock	35
Ships' ballast not an important source of introducing plant enemies	37
florists	37
List of current quarantine and other restrictive orders	44

GENERAL NOTES.

THE PINK BOLLWORM WORK.

The work of cleaning cotton fields at Barstow and Pecos and in the Big Bend of the Rio Grande has been completed. The area cleaned at Barstow amounted to 3,163 acres, at Pecos 1,086 acres, and in the Big Bend 508 acres, the total acreage being 4,757. The conditions in western Texas, notably the absence of grass in practically all the fields, have made it possible to clean the land much more thoroughly than was possible in southeastern Texas. The absence of volunteer cotton in western Texas made it unnecessary to uproot the plants, and the work was facilitated by cutting the plants with mowing machines, followed by raking and burning of the cotton stalks. The fallen bolls were then collected by hand and burned. The seed of the 1918 crop produced in the infested territory in western Texas has been safeguarded by crushing. All gins in the districts involved have been thoroughly cleaned and all scattered cotton seed in and about the premises destroyed. All shipments and sales of cotton seed have been traced and disposed of, either by burning or crushing. This has involved in some cases the necessity for a house to house canvass in the district to see that none of this seed was retained for planting or other purposes. The

records of sale and movement of lint have similarly been traced. The bulk of such lint has already been given foreign export.

The plan of crop control to safeguard this region for 1919 has been mentioned in a previous number of these announcements. Cotton seed for planting will be obtained from uninfested districts and the crop will be under the full control of the State and Federal authorities. Further, it is proposed that this district shall become a strictly noncotton zone after 1919 for such period as may be determined to be necessary. It is recommended that a noncotton zone be immediately established for the Big Bend district. This action was taken on account of the known infestation on the Mexican side of the river and the probability that otherwise Mexican cotton would be smuggled across, which it would be impossible to separate from cotton locally grown on the American side.

On March 10, 1919, a new act in relation to the pink bollworm passed by the Legislature of the State of Texas was approved by the governor, to be immediately effective. This act was drawn for the purpose of correcting certain defects in the old act which developed as a result of test cases tried during 1918. The main new feature is the provision for the establishment of regulated zones or districts in which the growing of cotton may be permitted under regulation. Under this act the old Trinity Bay district, known as Zones Nos. 2 and 3, has been declared a regulated zone and the growing of cotton in it is permitted under regulations to be enforced by the commissioner of agriculture of Texas. The proclamation establishing this zone is quoted below. Additional proclamations, covering the Pecos district, in western Texas, and the Big Bend district, and reestablishing the border zone comprising the counties of Kinney, Maverick, and Val Verde, will doubtless be issued shortly.

REGULATED COTTON ZONE NO. 2 AND NO. 3, MARCH 15, 1919.

[Proclamation by the governor of the State of Texas.]

To all whom these presents shall come:

Whereas under the provisions of section 10, house bill No. 329, approved by the governor March 10, 1919, Hon. Fred W. Davis, commissioner of agriculture of the State of Texas, has certified that he has made a thorough investigation of all cotton fields and adjacent lands in the Quarantine Zones 2 and 3 covered by pink bollworm proclamations of January 21, 1918, and pink bollworm proclamation of February 25, 1918, and modified by pink bollworm proclamation of May 7, 1918, such proclamations now being on file in the secretary of State's office, and said commissioner of agriculture certifies further that he concludes that the work of eradication of the pink bollworm pest has removed the condition of public menace to the cotton industry of the State from said district known as Zones Nos. 2 and 3, covered by the above proclamations of January 21, 1918, February 25, 1918, and modified by proclamation of May 7, 1918, and that it will not constitute a certain and known danger to permit the growing of cotton under restrictions adequate to prevent any spread of the pink bollworm in the above said area.

Now, therefore, I, W. P. Hobby, governor of Texas, by virtue of authority vested in me by the laws of the State of Texas, do hereby declare and proclaim that the territory quarantined by proclamations of January 21, 1918, February 25, 1918, and modified by proclamation of May 7, 1918, and known as Zones Nos. 2 and 3, is declared a regulated zone or district in which the growing of cotton is permitted if and when carried on in conformity to the regulations prescribed therefor by the commissioner of agriculture, as provided in section 10 of the amended pink bollworm act of 1919.

This proclamation is issued on this day, and is in full force and effect from and after this day until withdrawn by lawful authority.

In testimony whereof I have hereunto signed my name and caused the seal of the State to be hereon impressed, at the city of Austin, Tex., the 15th day of March, A. D. 1919.

(Signed) W. P. Hobby,
Governor of Texas.

By the Governor:
Geo. F. Howard,
Secretary of State.

EUROPEAN CORN-BORER QUARANTINE WITHHELD.

At the hearing conducted by the Federal Horticultural Board on February 26 the officials and other representatives of Massachusetts and New York expressed the very definite view that these States are in a position to handle the necessary quarantine and control measures, particularly with reference to the regulation of the movement of plants and plant products which is necessary in order to prevent the spread of the corn borer. It appears that the infestation in each of these States is entirely within the State and does not reach State lines and, therefore, that whatever local control is undertaken must necessarily be under State authority. In the circumstances the board indicated that it would be willing to leave the matter of Federal interstate quarantine open and to turn the problem over to these two States for the time being, awaiting a more accurate determination of the spread of the insect and a fuller showing of need before reaching a conclusion regarding Federal action as to New York and additional action as to Massachusetts involving control of the interstate movement of the products affected. This agreement was arrived at with the definite understanding, which was expressly given by the official representatives of these two States, that effective control would be exercised over the infested districts within their borders, so that there would be no possibility of interstate movement of infested products.

The commissioner of agriculture of the State of New York has issued a quarantine relative to the European corn borer, effective March 1, 1919, which prohibits the movement to any points outside of the quarantined counties of Schenectady, Saratoga, Montgomery, and Albany of any corn products or any herbaceous plants, such as cultivated garden or flowering plants, as celery, chard, green or string beans in the pod, beet tops, spinach, turnip tops, dahlia, gladiolus, and chrysanthemum.

As a further control measure, the commissioner of agriculture of the State of New York issued an order March 20 relative to the European corn borer, which contains the following provisions:

First. That all corn stubble or cornstalks of last year's growth remaining in fields within the infested districts or area must be removed and burned before the 15th day of May, 1919.

Second. No person in any of the infested districts or area shall, without written permission from the commissioner of agriculture of the State of New York, plow under or otherwise cover with soil any cornstalks or corn stubble, or corncobs or any manure containing cornstalks or corn stubble. That such cornstalks or corn stubble or corncobs must be left without covering or plowing under until the same has been examined, and all cornstalks or corn stubble or corncobs infested, or believed to be infested, destroyed.

Third. Persons having cornstalks upon their premises are hereby directed not to remove or dispose of the same otherwise than by feeding upon the premises without written permission from the commissioner of agriculture of the State of New York so to do.

The commissioner further proposes to send men into the infested area to assist the farmers in cleaning up the corn stubble in the fields and stable yards, and invites the cooperation of all persons.

We are advised by Mr. Wilfrid Wheeler, commissioner of agriculture of the State of Massachusetts, that the State legislature will shortly provide funds amounting to $50,000 for corn-borer work and that a special quarantine bill giving additional quarantine powers with respect to this insect will be passed in a short time by the State legislature, which is now in session.

PORT INSPECTION AT NEW ORLEANS DEFINITELY ESTABLISHED.

The preliminary investigation of the port of New Orleans to determine the needs of a regular inspection service was reported in the last number of these announcements. This service at New Orleans now has been definitely established by the appointment of Mr. Olden K. Courtney as inspector of the board at this port. Mr. Courtney was previously in the service of the board as an inspector assigned to the Mexican border. Mr. Edgar L. St. Ceran, chief customs boarding officer in the employ of the Treasury Department, has been appointed a collaborator of the board to assist Mr. Courtney. Between 90 and 100 ships from foreign ports come to New Orleans monthly. Some of these merely touch at the port en route to Europe or some other foreign destination. Any of them may bring, either with ships' stores or with the baggage of passengers, or as a portion of the cargo, plants and plant products which are denied entry in the United States by quarantine on account of the risk from such products of the carriage of dangerous insect pests or plant diseases.

INSPECTION OF PLANT INTRODUCTION GARDENS.

Entomological and pathological inspections of the various plant introduction gardens of this department are regularly made by the inspectors of the Federal Horticultural Board. Such inspection was made of the introduction gardens at Chico, Calif., in December, 1918, by Messrs. C. C. Thomas and H. L. Sanford; at Brooksville and Miami, Fla., in February, 1919, by Messrs. C. H. Kauffman and A. C. Mason; and the gardens at Mandan, N. Dak., will be given an inspection during the month of April by Mr. J. T. Rogers.

STERILIZATION REQUIREMENTS OF EARTH USED FOR PACKING FLOWER BULBS.

Amendment No. 1 to regulations supplemental to Notice of Quarantine No. 37, published in the last number of these announcements (p. 21) provides for the use of sand, soil, or earth as packing for bulbs when such sand, soil, or earth has been previously sterilized in accordance with methods prescribed by the Federal Horticultural Board. Such sterilization requirements have been determined as follows:

All sand, soil, or earth used for packing any of the bulbs referred to above must be brought to a temperature of 100° C. and held there for a period of one hour. Such sterilization is accomplished at one of the department's field stations by the use of a large iron receptacle holding about a cubic yard of soil. The soil should be kept stirred during the heating process. Any method which will maintain the heat throughout the mass at the required temperature for this length of time will be satisfactory to the Federal Horticultural Board The sterilization must be performed under the supervision of a duly authorized inspector of the country of origin and must be certified to by such inspector.

AMENDMENT NO. 2 TO REGULATIONS SUPPLEMENTAL TO NOTICE OF QUARANTINE NO. 37.

Under authority conferred by the plant quarantine act of August 20, 1912 (37 Stat., 315), it is ordered that Regulation 14 of the rules and regulations supplemental to notice of quarantine No. 37 governing the importation of nursery stock and other plants and seeds into the United States, effective June 1, 1919, be, and the same is hereby, amended to read as follows:

REGULATION 14.—*Special permits for importation in limited quantities of prohibited stock.*

Application may be made to the Secretary of Agriculture for special permits for the importation, in limited quantities and under safeguards to be prescribed in such permits, of nursery stock and other plants and seeds not covered by the preceding regulations for the purpose of keeping the country supplied with new varieties and necessary propagating stock: *Provided*, That this shall not apply to nursery stock and other plants and seeds covered by special quarantines and other restrictive orders now in force nor to such as may hereafter be made the subject of special quarantines. A list of nursery stock and other plants and seeds covered by special quarantines and other restrictive orders now in force is given in Appendix A of these regulations.

Done in the District of Columbia this 27th day of March, 1919.

Witness my hand and the seal of the United States Department of Agriculture.

[SEAL.] D. F. HOUSTON,
Secretary of Agriculture.

EXPLANATION OF PROVISIONS FOR ENTRY OF PLANT NOVELTIES AND PROPAGATING STOCK UNDER QUARANTINE NO. 37.

DEAR SIR: Regulation 14 of the regulations relative to the importation of nursery stock and other plants and seeds has been revised and reissued. In its new form it is essentially an interpretation of the old regulation 14 rather than an enlargement of powers under the quarantine, inasmuch as the regulation, as worded in the quarantine as originally issued, was intended to cover exactly what is now more clearly stated in the new regulation. This regulation provides for the importation, under a special permit from the Secretary of Agriculture, of limited quantities of otherwise prohibited stock for the purpose of keeping the country supplied with new varieties of plants and stock for propagation purposes not available in the United States. This amendment, however, does not apply to a few plants which have been specifically prohibited entry under other quarantines, as, for example, pines, *Ribes*, and *Grossularia*, from certain countries, and citrus, banana, and bamboo stock.

The following explanations of regulation 14 are given to indicate the limitations under this regulation and the procedure to be followed in making importations of the two classes of plants specified, namely, new varieties and necessary propagating stock.

The expression "new varieties" is understood to mean plant novelties; that is, new horticultural or floricultural creations or new discoveries.

"Necessary propagating stock" is understood to mean stock of old or standard varieties imported for the multiplication of the plants in question as a nursery or florist enterprise as distinguished from importations for immediate or ultimate sale of the stocks actually imported, and such importations will be restricted to stocks which are not available in this country in adequate quantities.

The expression "limited quantities" used in regulation 14 is understood to mean with respect both to new varieties and to standard stocks such quantities

as will supply reasonable needs for the establishment of reproduction plantings which may be thereafter independent of foreign supplies.

There is no limitation as to the number of permits for different plants or classes of plants under regulation 14 which an individual may request, but the applications will all be passed upon both as to necessity for the particular importation and as to the quantity adequate for the purpose intended, by experts of the department, for the information of the board prior to the issuance of the permits.

All importations under regulation 14 must be made under special permits through the Office of Foreign Seed and Plant Introduction of the Department of Agriculture, but for the use of the individual importer. The importer will be required to meet all entry, transportation, and freight-handling charges. The department will make no charge for inspection and supervision. The necessary procedure for making such importations is as follows:

1. The Federal Horticultural Board will supply, on request, an application blank, upon which request may be made for a special permit to import. This application embodies an agreement on the part of the importer that if the imported material is found on examination by an inspector of the Department of Agriculture to be so infested or infected with insects or disease that it can not be adequately safeguarded it may be destroyed, and such destruction will not be made the basis of a claim against the Department of Agriculture for damages. The application must be accompanied by a statement certifying that the plants to be imported are novelties or, if standard varieties of foreign plants, that stocks in adequate quantities for their propagation are not available in this country, and that in either case they are to be imported for the establishment of reproduction plantings and not for immediate or ultimate sale of the stocks actually imported. In exceptional cases the importation of novelties may be made for personal use but not for sale. The application must also give the name and address of the exporter, country, and locality where the stock was grown, the name and address of the importer, and the name and address of the nursery or other establishment in which the plants are to be reproduced on release.

2. If the permit is issued the applicant will be furnished shipping instructions and shipping tags to be forwarded with his order to the exporter. The plants will, in consequence, be addressed in bond to the United States Department of Agriculture, Bureau of Plant Industry, Washington, D. C., United States of America, and indorsed "Foreign Seed and Plant Introduction, for (insert name of importer)," and arrangements must be made with some responsible agency in Washington for the clearance of the plants when received through the customhouse at Georgetown, D. C., together with the payment of all charges involved.

3. Upon clearance through the Georgetown customhouse the material will be turned over to the Office of Foreign Seed and Plant Introduction by the authorized agent of the importer, and in the specially equipped inspection houses and under expert care as to the welfare of the plants be carefully examined by inspectors of the Federal Horticultural Board. If found free from dangerous insects or diseases, the shipment will be immediately and carefully repacked and forwarded by express, charges collect, to the importer.

4. Cleaning and disinfection will occur for slight infestation, but should the material be found to be so infected or infested with either disease or insects that it can not be so adequately safeguarded it will either be destroyed or, when possible and desirable, returned to the point of origin.

Yours very truly,

C. L. Marlatt,
Chairman of Board.

RESTRICTION ON MAILING OF CORN AND CORN PLANTS IN MASSACHUSETTS.

Quarantine order No. 36, issued by the Secretary of Agriculture, under authority of the plant-quantine act, quarantining the townships of Beverly, Danvers, North Reading, Reading, Lynnfield, Peabody, Salem, Marblehead, Swampscott, Lynn, Saugus, Wakefield, Woburn, Stoneham, Melrose, Winchester, Medford, Malden, Everett, Revere, Winthrop, Nahant, Lexington, Arlington, Somerville, Cambridge, Belmont, Waltham, Watertown, Newton, Brookline, and Boston, in the counties of Essex, Middlesex, Suffolk, and Norfolk, in the

State of Massachusetts, on account of an injurious insect, namely, the European corn borer (*Pyrausta nubilalis*), prohibits the movement from the quarantined areas of corn fodder or cornstalks, whether used for packing or otherwise; green sweet corn, roasting ears, corn on the cob, or corncobs.

Under the provisions of paragraph 1, section 478, Postal Laws and Regulations, the acceptance for mailing of the products named is subject to the restrictions of the order above mentioned, and postmasters in the areas quarantined by the order shall not, therefore, accept any of the products named for mailing to points outside of such areas.

The quarantine order does not apply to the movement by the United States Department of Agriculture of the products named for experimental or scientific purposes.

[Reprinted from the March, 1919, supplement to the United States Official Postal Guide.]

ALL OUTSTANDING PERMITS FOR IMPORTATION OF NURSERY STOCK REVOKED MAY 31, 1919.

DEAR SIR: The Rules and Regulations Governing the Importation of Nursery Stock into the United States, effective on and after July 1, 1916, will be superseded on and after June 1, 1919, by Quarantine No. 37 and the regulations supplemental thereto. All permits for the importation of nursery stock issued under the former regulations will be revoked on May 31, 1919.

Under Quarantine No. 37 permits for the importation of nursery stock and other plants and seeds from countries which maintain inspection and certification of nursery stock in accordance with the requirements of the plant quarantine act will be valid until revoked. Applications for such permits must specify the exact designation of the nursery stock and other plants and seeds to be imported, such as "lily bulbs," "rose stocks," and "fruit-tree seeds." Permits to import from countries which do not maintain inspection will be valid for the importation only, and applications for such permits must contain a definite statement of the quantity to be imported. Permits of the former class will be issued for any customs port of entry in the United States. Permits of the latter class will be issued only for ports at which the board maintains inspection service, including Philadelphia and New Orleans, in addition to the ports mentioned in regulation 6.

Persons contemplating the importation after June 1, 1919, of nursery stock or other plants and seeds covered by regulation 3 of the new regulations should make application to the board in ample time to secure the necessary permit before the order is placed, or at least before shipment is made. Blanks upon which applications may be made will be furnished by the board upon request. Care should be taken to see that all the information called for on the blank is furnished.

Yours very truly,

LESTER E. PALMER,
In Charge of Entry of Plants and Plant Products under Restriction.

Approved:
C. L. MARLATT,
Chairman of Board.

CAN NOT TRUST TO FOREIGN INSPECTION OF NURSERY STOCK.

UNITED STATES DEPARTMENT OF AGRICULTURE TELLS DANGER THAT MAKES NEW PLANT QUARANTINE NECESSARY.

[Press notice issued by the Office of Information, U. S. Department of Agriculture.]

The main arguments of objectors to Plant Quarantine No. 37, which will greatly restrict the entry of nursery stock and other plants and seeds, beginning June 1, 1919, are that either no pests are brought in on such imported stock or that thorough inspection abroad would eliminate any undesirable insects. There is no question but that the chief exporting foreign Governments have given to their nursery stock the best inspection which human skill and science can afford. Failures, says the United States Department of Agriculture, are due to the human equation and to conditions not subject to change, which make inspection and certification insufficient safeguards.

The inadequacy of such inspection since 1912, when it became operative, is shown by the findings resulting from reinspection of imported material at destination in this country. Data gathered by the United States Department of Agriculture show that there have been received from Holland 1,051 infested shipments, involving 148 kinds of insect pests; from Belgium, 1,306 infested shipments, involving 64 kinds of insects; from France, 347 infested shipments, involving 89 kinds of insects; from England, 154 infested shipments, involving 62 kinds of insects; from Japan, 291 infested shipments, involving 108 kinds of insects; from Germany, 12 infested shipments, involving 15 kinds of insect pests. Many of these intercepted insects are not known to be established anywhere in this country, and numbers of them, if established, would undoubtedly become important farm, garden, or forest pests.

DANGER ILLUSTRATED.

Typical of the insects thus imported, some of which have come in on more than 1,000 shipments, are the records in relation to gipsy and brown-tail moths.

Under the system of inspection which has been established in the principal exporting countries there is little excuse for the passing and certification of stock infested with the egg masses of the gipsy moth or with the large and rather conspicuous leafy winter nests of the larvæ of the brown-tail moth. In point of fact, however, during the period in which the highest possible grade of inspection has been enforced no less than 63 different shipments of plants from foreign countries have been found to be infested with egg masses of the gipsy moth or larval nests of the brown-tail moth. Three of these were from Japan and the others were from France, Holland, or Belgium.

Unfortunately, these records do not necessarily comprise the total entry of these two pests. They represent merely the instances of infestation discovered by reinspection on this side. Under the law the inspection of imported nursery stock in this country is left to the inspectors of the States, and the finding of infestation is, therefore, entirely dependent on the efficiency of State inspection. In many States this inspection is of a high order, and probably most, if not all, instances of infestation are found. In other States the inspection service is inadequately provided for and insufficient, and in a few States the service has little support and little, if any, efficiency. There is, therefore, the possibility that one or both of these pests have already gained foothold at one point or another in the United States and have not yet been discovered and reported. In this connection it should be remembered that the gipsy moth was 20 years in Massachusetts before it was known, and this in the face of the fact that the infestation started in a thickly populated suburb of Boston.

That foreign inspection gives no real securities is sufficiently shown in this record relating to two insects for which there is little, if any, excuse for overlooking.

WARN OF LOSS AND SUFFERING.

The establishment of these two insects in different parts of the United States would soon lead to their general spread throughout the country. What this would mean in cost and damage, and also in human suffering, can hardly be estimated. Only a portion of the New England States is now invaded by these insects, and yet the expenditure in clean-up and control work alone amounts to more than a million dollars a year by the States concerned in addition to an aiding Federal appropriation of upward of $300,000 annually.

An important consideration in relation to the brown-tail moth is that in addition to the actual damage to deciduous forests, orchards, and ornamental plantings the larval hairs which are shed and fill the air at the time of the transformation of the insect to the chrysalis stage have an intensely irritating or nettling character, which causes a great deal of inflammation to the exposed parts of the human skin, such as the neck, face, and hands, and this irritation, in one or two known instances, and perhaps in others, has been the cause of death by affecting the lungs and leading to fatal cases of tuberculosis. Should the brown-tail moth reach the South and Southwest, this irritation to human beings would doubtless be increased by reason of greater warmth and by the moisture of the skin and consequent greater likelihood of adherence of the larval hairs.

SHIPS' BALLAST NOT AN IMPORTANT SOURCE OF INTRODUCING PLANT ENEMIES.

[Press notice issued by the Office of Information, U. S. Department of Agriculture.]

Objectors to the plant quarantine have insisted that there is as much danger of the introduction of insect pests in the earth used as ballast by ships returning from Europe as in the earth around foreign plants imported in balls, pots, or tubs. The earth around balled, potted, or tubbed plants can not be disinfected or cleaned and involves a large and known risk. In view of the argument that earth ballast is equally dangerous, the Federal Horticultural Board of the United States Department of Agriculture during the past two months has undertaken a thorough investigation of such ships' ballast. This investigation has had special relation to the ports of New York and Boston, but is being extended to cover New Orleans, San Francisco, and other principal ports of the United States. The war conditions have evidently very much increased the amount of ballast thus brought to the ports of Boston and New York, for the reason that during the war transports carrying troops to France returned, for the most part, in ballast. The material employed for such ballast, however, would seem to involve very little risk of being the means of the introduction of dangerous plant enemies, according to statements made by the investigators of the Department of Agriculture. The bulk of it consists of sand, gravel, broken rock, and even ashes. Soil is occasionally employed, but in the main this soil seems to have been derived from river banks or from excavations for construction purposes (cellar soil); in other words, such primeval soil as has had probably little or no touch with cultivated land. It is not at all probable that valuable garden or field soil would be secured and used for ballast purposes. The sand and gravel is, as a rule, sold for building or other construction purposes and the broken rock and soil have been used to some extent for filling in, and that brought in on Government vessels largely for fills in connection with Government constructions on the water front. Some of this ballast has been towed to sea and dumped along with city waste. It is perfectly apparent that there is very little danger from such material, and it can not be considered in the same sense at all as the highly cultivated soil coming with plants grown in greenhouses or in gardens or fields, and should any insect life get into such ballast material it would be accidental and exceptional. This investigation, however, will be continued to determine whether there is any danger in connection with such ballast which should be guarded against. Undoubtedly the amount of ballast brought to American ports will greatly diminish when normal commercial conditions are fully resumed.

SECRETARY OF AGRICULTURE REPLIES TO PROTESTING COMMITTEE OF NURSERYMEN AND FLORISTS.

Some six weeks ago a committee representing the New York Florists Club, the Society of American Florists, and the American Association of Nurserymen requested a private audience with the Secretary to discuss certain features of Plant Quarantine No. 37. Such an audience was granted, and a conference was held in the office of the Secretary on March 1, when the committee referred to presented their protests against the quarantine and left with the Secretary typewritten and printed briefs for his further consideration.

The Secretary submitted these briefs and the evidence presented to Mr. Thomas G. Shearman, who is in charge of the investigation of appeals from decisions of the Forest Service, and who has hitherto never had any relation with the Federal Horticultural Board, and directed him to make a thorough investigation of the entire subject. Mr. Shearman was given all the department records and correspondence in relation to the hearing and quarantine, and included in his field of inquiry every phase of the subject, and particularly all of the criticisms of Quarantine No. 37, received either directly from the petitioners or by letter and also as published in the trade journals. His examination of this material was made independently of the Federal Horticultural Board and the plant experts of the Bureau of Plant Industry who had advised the board with regard to the quarantine, and his report to the Secretary represents his individual unbiased judgment.

Mr. Shearman's report and the protests and briefs submitted by the committee of nurserymen and florists were carefully studied by the Secretary, and

the latter's decision is incorporated in a letter addressed to Mr. Winfred Rolker, chairman of the New York Florists' Club protesting committee, dated March 28. Similar replies were also addressed to J. F. Ammann, president, Society of American Florists, and to Mr. Thomas B. Meehan, Dresher, Pa. The Secretary's letter to Mr. Rolker follows:

MARCH 28, 1919.

MR. WINFRED ROLKER,
New York Florists' Club Protesting Committee,
51 Barclay Street, New York, N. Y.

DEAR SIR: As a result of the meeting in reference to Plant Quarantine 37, which was held in my office March 1, 1919, and which was attended by yourself as a representative of the New York Florists' Club Protesting Committee and by representatives of the Society of American Florists and of the American Association of Nurserymen, this whole subject has been thoroughly reconsidered. This was believed to be desirable, in order to determine whether the suggestions and objections in reference to the quarantine order made at that meeting and at other times by said associations and by certain individuals were such as to warrant any essential modification thereof.

It has been definitely known for many years that plant diseases and insect pests are continually being introduced in this country through the importation of nursery stock and other plants and plant products and that the results have in many instances been disastrous over wide sections of the country. The so-called plant quarantine act of August 20, 1912 (37 U. S. Stats. at Large, p. 315), represents the official recognition of this fact by Congress. Under the authority of this act the department has from time to time promulgated a number of quarantines restricting or prohibiting the importation of certain plants and plant products found to have been the cause of disease and infestation. As a real remedy this method has been found in many cases to be entirely inadequate, because it is based largely on the principle of providing against dangers after they have been discovered, when it was often too late, owing to the fact that the damage already had been done and the infestation already had begun to spread. Such a method is in the nature of an attempt to cure rather than to prevent. On the other hand, attempts at prevention, instead of cure, have been made from time to time by provisions for inspection, either in foreign countries or, upon importation, by Federal officials or State authorities. But the method of inspection, as well as that of cure, has been found to be entirely inadequate in many cases.

Largely because of the havoc which has been wrought by such importations and also as the result of investigations carried on by the department and the definite scientific information received from reliable sources it has been felt that something more comprehensive was needed than either a piecemeal quarantine, which begins the application of a remedy after the particular injury has begun to operate, or a system of inspection by which in many cases, no matter how conscientious the inspectors may be, it is impossible to discover the harmful disease or pest.

In illustration of the growing sentiment in the country for an improvement over prevailing methods of preventing the introduction of plant diseases through importations reference may be made to the resolutions passed January 1, 1918, by the Section of Horticultural Inspection of the American Association of Economic Entomologists at its meeting in Pittsburgh. At that time recommendations were made (1) for the prohibition of the importation of all nursery stock as defined in the quarantine act of August 20, 1912, except under Federal quarantine regulations; (2) immediate, absolute embargo against nursery stock with soil around the roots; (3) ultimate prohibition of all kinds of nursery stock after allowing suitable time for trade adjustment.

Believing that the time had come to take definite steps along the lines suggested, the Bureau of Plant Industry was asked for information (1) as to the advisability of excluding from importation all ornamentals and other plants with soil about the roots; (2) as to the exclusion of all kinds of nursery stock from Asia, Africa, and other little-known localities. In response to this request, the bureau submitted a report on February 26, 1918, in which it was stated, among other things, that, in order to protect the country against dangerous plant pests and diseases, the time seemed to be at hand "for the inauguration of a policy that would gradually result in the exclusion of all foreign nursery and florist stock."

Thereafter, on March 28, 1918, notice of a public hearing to be held May 28, 1918, was sent to all nurserymen on the mailing list of the Federal Horticultural Board and was published in the horticultural and florist trade papers, in order that suggestions of a practical nature might be made by private individuals or associations whose business would be affected by a more comprehensive general quarantine and by State officials or bodies interested in the protection which such a quarantine would afford.

The hearing for which notice was thus given was held on the date specified and was largely attended by State officials and private individuals. The hearing, however, was very one-sided, for the opinions expressed were almost unanimous as to the wisdom of the proposed quarantine for the exclusion of diseased and insect-bearing plants and plant products. Furthermore, many speakers favored a much more complete exclusion than that suggested in the tentative recommendations set forth in the notice of hearing. The letters received from nurserymen and State and other officials who were unable to attend the hearing were likewise practically unanimous with respect to the need of a much more comprehensive and general restriction upon plant importations than had ever been put in force.

Final action was not taken by the department directly after this hearing. Instead, the whole question was again taken under advisement and again thoroughly investigated for a period of three months, during which time many nurseries and florists' establishments in different parts of the country were visited for the purpose of getting their point of view. Further consultation also was had with the different specialists in the employ of the Government. The result of this further investigation was thereupon embodied in a proposed general plant-quarantine order, which is practically identical with Quarantine 37, as finally issued. This form of proposed quarantine was, on August 29, 1918, sent to the trade journals, to the nursery and other societies represented at the hearing of May 28, 1918, to individuals who had manifested their interest by speaking at the hearing, and to others, with the request that they give it careful consideration, in view of a possible conference later for the purpose of discussing the various regulations contained therein. Such a conference was called for October 18, 1918, through a circular letter sent out about two weeks earlier. Another notice was sent out eight days before the meeting suggesting that, because of the prevalence of influenza in Washington at that time, those who intended to present arguments or facts with reference to the proposed quarantine at the meeting should do so by mail, unless they had special reasons for attending the conference in person.

Although the attendance at this conference in October, 1918, was not so large as at that of May 28, 1918, there was present a considerable number of prominent florists and ornamental horticulturists, as well as representatives of trade associations or State officials interested in the subject to be discussed. A very full presentation was made, chiefly by Mr. Eisele, representing the Henry A. Dreer nurseries, of the dissenting view of florists and horticulturists, who wished to continue the importation of the class of plants and plant products which would be prohibited under the proposed quarantine.

It was promised at this conference that the facts presented and suggestions made would be submitted to the experts of the department and given careful consideration. This course of action was followed with the result that the department was still convinced that no change in the proposed regulations was warranted, in view of the real danger which threatened the forests, farms, orchards, and gardens of the country through the introduction of pests and diseases by plant importation.

Various objections to the quarantine order under consideration have been brought to the attention of the department in one way or another, both before and after the quarantine was officially issued, and I wish to take up the more important of these, so that the department's attitude in reference thereto may be made more clear.

First. Certain objections have been made to the procedure preliminary to the issuance of the quarantine, such as those pointed out specifically in an "Appeal" filed by the American Association of Nurserymen on February 14, 1919, in which it is stated that the notice sent out for the hearing of May 28, 1918, "misled" the trade as to the purpose and scope of the proposed quarantine, and that in its final form the quarantine was in the nature of a "surprise."

It is true that the notice sent out for the hearing of May 28, 1918, made special reference to a limited form of restriction, namely, the exclusion of balled

plants, etc., and importations from countries more or less unknown, but it was also specifically stated therein (1) that the department was considering the advisability of placing restrictions and prohibitions on "nursery stock and other plants and seeds from *all* foreign countries" necessary to prevent the introduction of *any* tree, plant, or fruit disease, or *any* injurious insects; (2) that the hearing was for the purpose of considering "such" restrictions or prohibitions; (3) that the particular subjects mentioned were to be given "special consideration," but that this did not limit the scope of the discussions; and (4) that the presentation and discussion of these particular subjects should not be taken as limiting the ultimate action of the department. Moreover, an examination of the discussion as carried on at the hearing of May 28, 1918, makes it very clear that those who attended and spoke fully recognized that the discussion was not limited to these particular topics, since practically the whole field of plant and plant product restriction was embraced therein. This was also true of the letters received from those who could not attend the meeting. If these statements, so plainly a part of the notice of hearing, were overlooked by any interested parties they might, of course, say that they failed to appreciate the scope of the proposed hearing, but they certainly can not properly say that they were "misled".

Neither does there seem to be any real ground for the claim of "surprise" as to the final form of Quarantine 37. As shown above, no official quarantine regulations were issued immediately after the hearing of May 28, 1918, or even after three months' further investigation by the Bureau of Plant Industry. Instead of issuing the quarantine at such time, which would have been entirely justified, a proposed form thereof was prepared and sent out in August, 1918, for consideration by all parties interested, and a conference for the discussion of the terms was called for October 18. As this proposed form was almost identical with the quarantine as actually promulgated on November 18, 1918, one month after the conference was held and nearly six months after the hearing of May 28, 1918, at which practically the whole subject was discussed, it is difficult to see how there can be any room for the element of "surprise" with respect to the action taken.

Second. Objection has been made to the legality of the quarantine order, such as that found in the "Appeal" of the American Association of Nurserymen, wherein the statement is made that Plant Quarantine 37 is of "doubtful legality." This point was formally passed upon by the solicitor of the department on November 9, 1918.

It is proper to point out that in the discussion of this point as it appears in the "Appeal" it is apparently assumed that the department was necessarily bound to act only on such evidence as was presented at the hearing of May 28 or on that contained in the department's publication entitled "A Manual of Dangerous Insects, etc.", and, by quoting excerpts from such evidence, alleged to be indefinite or not in point, it is argued that the action subsequently taken was unwarranted. But this entire assumption ignores the many years of investigation carried on by or in cooperation with the department, or by individual scientists, with reference to plant diseases and insect pests resulting from importations, the special investigation made during the summer of 1918 with respect to suggestions made at the hearing of May 28, 1918, and the evidence presented at or in connection with the hearing held October 18, 1918.

Third. Objections involving amendments to or substitutes for portions of the quarantine order.

(*a*) That instead of naming the particular bulbs which, when free of earth, would be allowed under prescribed regulations, provision should be made for the entrance of *all* bulbs, when freed of earth, except such as were particularly named for exclusion.

It is easy to see that the effect of such a form of statement would be precisely the same as that now embodied in the quarantine order as issued, while it would require a very much longer statement to specify, with any kind of completeness, the entire list of those that should be excluded.

(*b*) That bulbs do not necessarily have to be wrapped in living earth, that they can be wrapped in earth which has been specially prepared and sterilized, and that bulbs so prepared for import should not be excluded.

It was promised that this matter would be further considered and such further consideration has resulted in the issuance, on February 12, 1919, of an amendment to regulation 3 of the quarantine, which reads as follows:

"*Provided*, That the requirement as to freedom from sand, soil, or earth shall not apply to sand, soil, or earth used for packing the articles enumerated in

item No. 1 of this regulation when such sand, soil, or earth has been previously sterilized in accordance with methods prescribed by the Federal Horticultural Board under the supervision of a duly authorized inspector of the country of origin. Such sterilization shall be certified to by the duly authorized inspector of the country of origin."

(*c*) That provision for more thorough *inspection* should have been made instead of a quarantine *excluding* plants grown in such countries as Holland, Belgium, England, France, and Ireland.

As already stated, there are many instances of disease and pests which are not discernible by any practical method of inspection yet known. This seems to be abundantly established by the testimony of technical men and scientists, based upon experience and thorough investigation. It was voiced at the hearing of May 28, 1918, by Mr. J. G. Sanders, secretary of the National Horticultural Inspectors' Association. It was his opinion that in certain well-known cases inspectors, even when they do their best, are "absolutely helpless" in surely preventing the introduction of pests and disease.

It is acknowledged that Holland has one of the best, if not actually the best, of the inspection systems of the foreign countries from which plants are imported, and yet since the enactment of the plant quarantine act in 1912 the department has incontestable proof of more than 148 *species* of injurious insects found in nursery stock imported from Holland, and many of these were entirely new, so far as this country is concerned, thus bringing with them the possibility of new dangers to forest, farm, and garden.

It is well established by the testimony of investigators in and out of the department that the chestnut blight, which came to us from the Orient, and the white pine blister rust and the poplar canker, which came to us from Europe, can not be discovered, even by the most expert plant pathologist, in certain stages of these diseases, because at such times they are absolutely invisible from the outside.

The inadequacy of inspection, therefore, as a sure preventive of the introduction of plant pests and plant diseases is apparently not open to serious question.

(*d*) That, instead of the drastic form of exclusion embodied in Plant Quarantine 37, individual nurserymen be permitted to establish a portion of their nurseries as quarantine stations under Federal supervision.

It is apparent, however, that it would be decidedly unwise and dangerous to place these stations all over the country, and that, merely from a selfish point of view, no nurseryman could afford to have such an experiment carried on in his nursery. Diseases and pests would, of course, come in, since no kind of inspection can absolutely keep them out, and since, indeed, that would be the purpose of having such a quarantine station, namely, to receive plants with their recognized diseases and there stop them and eradicate them. In a short time some dangerous infestation would surely be found which would make it necessary for the Federal inspector to close the whole nursery, with the result that all the business of that nursery would absolutely cease, at least until the infestation was eradicated.

Fourth. Objections to particular features of the quarantine order.

(*a*) That there is no reasonable ground for excluding finished rose plants when the quarantine allows the importation of rose stocks for propagation.

This distinction is based on the fact that while there is danger in the importation of either class the danger is not equal in both cases. Rose stocks are brought into the country by nurserymen and importers in large quantities, they are handled for propagation under supervision and inspection, and they are again handled by experts for distribution. On the other hand, the finished rose plants are older and more developed than the rose stocks, and therefore more likely to be infested. They are often brought in by importers who do not have any nurseries, or even a foot of glass, and may be shipped at once all over the country to customers who have neither the facilities nor the knowledge for giving them such attention as will prevent the spread of any disease or pest they may be carrying.

It is recognized also that rose stocks must come in, if the country is to have anything like an adequate supply of roses. It is believed, in the circumstances, that the injury resulting from the entire exclusion of rose stocks would outweigh the consideration of the smaller risk attendant upon such importations.

(*b*) That ornamental stocks and seedlings should be allowed to come in if fruit stocks and fruit seedlings are permitted.

As already stated, Plant Quarantine 37 was issued because, and solely because, the department is convinced that a more comprehensive restriction on plant importation than any of the quarantines now in force is necessary to secure adequate protection to the forests, farms, and orchards of the United States. Complete safety can probably be attained only by absolute exclusion of all plants and plant products, since it is known that no form of inspection is an infallible preventive. The department felt, however, that it would not be justified at this time in prohibiting the importation of nursery stock which is essential to the floriculture and horticulture of the country, including fruit seedlings and fruit stocks, although it seemed clear, on the other hand, that everything feasible should be done to reduce to a minimum the danger which attends the importation of all nursery stock. In excluding ornamental stocks and seedlings, the department has, therefore, taken a definite step toward absolute safety which will materially reduce the risk known to exist and at the same time will not deprive the people of anything which is indispensable.

(*c*) That it is unreasonable to admit six specified varieties of bulbs and exclude the far greater number of other bulbs, corms, tubers, etc.

In respect to this point, the experience of the department through many years has shown that with certain classes of bulbs there is but little danger, if inspection is careful. These comprise the cleaner sort of bulbs that are more easily disinfected, which come in large quantities from a limited number of well-known countries which have the best inspection services. All danger is not absent even then, but it is comparatively small, and the quarantine specifies such bulbs and allows them to come in. On the other hand, the excluded bulbs, which are not named, belong to miscellaneous classes, which come from more remote corners of the earth, whose insect dangers are necessarily little known and therefore still more difficult to make even comparatively safe by inspection.

Fifth. Objections to collateral matters and matters of less importance.

(*a*) The department is charged with recommending the order as a tariff measure so as to stimulate the business and enhance the profits of certain domestic nurseries which in greater or less measure produce the excluded plants or plants which can be to some extent substituted for them. This result may follow in some cases. It is impossible for any fair-minded and disinterested person, however, to trace the action of the department, step by step, to consult the authorities it has relied on, as it has moved through its promulgation of piecemeal quarantines toward this quarantine as now framed and issued without being convinced that the action taken has been the result of nothing but a clear purpose to stop, as far as possible, the entrance of further plant diseases and plant pests into the United States, such as have in the past been so injurious to the forests, fields, farms, and orchards of the country.

(*b*) It is claimed that the quarantine is unjust to the European countries that supply such a large amount of the plants and plant products which will be excluded by the quarantine.

Aside from the fact that this quarantine will put this country more nearly on a par with the chief plant-exporting countries of Europe, which have for a long time maintained almost absolute prohibition against plant imports from the United States, it should be sufficient to point out that a quarantine which admittedly will cause loss to and necessitate a period of readjusment on the part of some of our own citizens should not be given up for the reason that it will adversely affect some citizens of other countries, when it is designed to and will protect an immensely greater number of our own people from an injury and loss which experience has shown is certain to result if this quarantine is not enforced.

(*c*) Other matters, such as controversies which have arisen at the hearings and otherwise between the officials of the department and some florists and nurserymen, with reference, for instance, to the habits of particular insects or as to whether certain pests or diseases are really actively dangerous or as to whether they have ever been found in this or that class of imported plants, seem to me relatively unimportant and to call for little comment, as they do not affect the broader considerations on which this quarantine is based. What the facts are in each case, as maintained by the department, is shown to be based on testimony of technical and scientific investigators and specialists and their testimony is of necessity a much more certain means of arriving at the truth than the more or less incidental observations of those whose time must be largely devoted to the commercial side of plant importation, propagation, and distribution, no matter how well established they may believe their conclusions to be.

As the result of my consideration of this entire matter it appears to me that the department had to face and solve this problem: Given the fact, on one hand, that any importation of plants and plant products is necessarily fraught with danger from disease or pests, and the further fact, on the other hand, that entire exclusion would be unwise at this time, how could a general quarantine be drawn so as to reduce to the lowest terms both the disease and pest dangers involved in importation and the injury involved in restriction.

In working out the solution of this problem two considerations have been kept constantly in mind with reference to the different classes of plants and plant products to be covered by the quarantine order: (1) The necessity or importance of the particular plant and (2) the danger arising out of its importation. The quarantine as finally formulated has been the result of bringing to bear upon these two considerations such technical and scientific information as could be obtained from sources believed to be reliable.

Necessarily there are all kinds of gradations, both in the risk of disease or infestation and in the importance or necessity of the various plants considered. Where the necessity is at the maximum and the risk is toward the minimum, the quarantine will be found to be inoperative, as, for instance, in the case of fruits, vegetables, and cereals for food and similar purposes, and field, vegetable, and flower seeds. When, on the other hand, the risk is at the maximum and the necessity is at the minimum the quarantine is found to be strict, as, for instance, in the case of plants whose roots are balled in ordinary earth.

It is clearly my opinion that the distinctions and classes in this quarantine order have been made only after careful consideration of the best information obtainable. It is also evident that the various restrictions embodied in the order are not necessarily final; one amendment has already been issued, that of February 12, 1919, with reference to the use of sterilized soil about the roots of imported plants. It is therefore always possible that further convincing evidence may make other amendments necessary, not only for modifying or removing restrictions now in force, but also for extending existing restrictions or adding further prohibitions thereto.

It is recognized that the enforcement of certain features of this quarantine order will injure some horticultural interests, not only by necessitating readjustments but by the possible loss of some lines of profit. Such provisions, however, have been inserted only because it was believed on satisfactory evidence that they were necessary in order to protect the wider interests of the public at large.

It is also recognized that some of the plants and plant products whose importation has made them more or less popular will become rarities until they can be produced in this country, and if, as seems likely in a few cases, this turns out to be impossible, that it will be necessary for the public to do without them or to accept a substitute which can be produced here or which can be imported with safety.

In any discussion of the purpose and effect of this quarantine order the fact should not be overlooked that definite provision is made therein for the entry in limited quantities, even of the prohibited bulbs and plants, through the Government Office of Foreign Seed and Plant Introduction. In such case the importation would be safeguarded by the highly developed quarantine and inspection service of the department, and the country could in this way gradually be supplied with new varieties and the necessary stock for propagation without the dangers attendant upon commercial importations.

In view of the facts and considerations above set forth it is my opinion that Plant Quarantine 37 is scientific in origin and purpose, as well as sound in principle, and that its enforcement will make for the safety of the plant, fruit, and forest interests of the country, with as little injury to private agencies and individuals as is compatible therewith.

Very truly yours,

(Signed) D. F. Houston,
Secretary.

LIST OF CURRENT QUARANTINE AND OTHER RESTRICTIVE ORDERS.

QUARANTINE ORDERS.

The numbers assigned to these quarantines indicate merely the chronological order of issuance of both domestic and foreign quarantines in one numerical series. The quarantine numbers missing in this list are quarantines which have either been superseded or revoked. For convenience of reference these quarantines are here classified as domestic and foreign.

DOMESTIC QUARANTINES.

Date palms.—Quarantine No. 6: Regulates the interstate movement of date palms or date-palm offshoots from Riverside County, Calif., east of the San Bernardino meridian; Imperial County, Calif.; Yuma, Maricopa, and Pinal Counties, Ariz.; and Webb County, Tex.; on account of the Parlatoria scale (*Parlatoria blanchardi*) and the Phoenicococcus scale (*Phoenicococcus marlatti*).

Cotton seed and cottonseed hulls.—Quarantine No. 9: Prohibits the importation of cotton seed and cottonseed hulls from the Territory of Hawaii on account of the pink bollworm.

Hawaiian fruits.—Quarantine No. 13, revised: Prohibits or regulates the importation from Hawaii of all fruits and vegetables, in the natural or raw state, on account of the Mediterranean fruit fly and the melon fly.

Sugar cane.—Quarantine No. 16: Prohibits the importaion from Hawaii and Porto Rico of living canes of sugar cane, or cuttings or parts thereof, on account of certain injurious insects and fungous diseases.

Cotton.—Quarantine No. 23, revised: Regulates the movement of cotton from Hawaii to the continental United States, on account of the pink bollworm.

Five-leafed pines, Ribes and Grossularia.—Quarantine No. 26, as amended: Prohibits the interstate movement of five-leafed pines, currant and gooseberry plants from all States east of and including the States of Minnesota, Iowa, Missouri, Arkansas, and Louisiana to points outside of this area; prohibits, further, (1) the interstate movement of five-leafed pines and black-currant plants to points outside the area comprising the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New York, and (2) to protect the State of New York, the movement from the New England States, on account of the white-pine blister rust.

Sweet potato and yam.—Quarantine No. 30: Prohibits the movement from the Territories of Hawaii and Porto Rico into or through any other Territory, State, or District of the United States of all varieties of sweet potatoes and yams (*Ipomoea batatas* and *Dioscorea* spp.) regardless of the use for which the same are intended, on account of the sweet-potato weevil (*Cylas formicarius*) and the sweet-potato scarabee (*Euscepes batatae*).

Banana plants.—Quarantine No. 32: Prohibits the movement from the Territories of Hawaii and Porto Rico into or through any other Territory, State, or District of the United States of any species or variety of banana plants (*Musa* spp.), regardless of the use for which the same are intended, on account of two injurious weevils, *Rhabdocnemis obscurus* and *Metamasius hemipterus*.

Gipsy moth and brown-tail moth.—Quarantine No. 33: Regulates the movement interstate to any point outside of the quarantined towns and territory, or from points in the generally infested area to points in the lightly infested area, of stone or quarry products, and of the plants and the plant products listed therein. The quarantine covers portions of the New England States.

Japanese beetle.—Quarantine No. 35: Regulates the movement interstate to any point outside the townships of Delran, Chester, and Cinnaminson, Burlington County, N. J., of green corn, commonly called sweet or sugar corn, on account of the Japanese beetle (*Popillia japonica*).

European corn borer.—Quarantine No. 36: Prohibits the movement interstate to any point outside of the quarantined area of corn fodder or cornstalks, whether used for packing or otherwise, green sweet corn, roasting ears, corn on the cob, and corn cobs, on account of the European corn borer (*Pyrausta nubilalis*).

FOREIGN QUARANTINES.

Irish potato.—Quarantine No. 3: Prohibits the importation of the common or Irish potato from Newfoundland; the islands of St. Pierre and Miquelon; Great Britain, including England, Scotland, Wales, and Ireland; Germany; and Austria-Hungary, on account of the disease known as potato wart.

Mexican fruits.—Quarantine No. 5, as amended: Prohibits the importation of oranges, sweet limes, grapefruit, mangoes, achras sapotes, peaches, guavas, and plums from the Republic of Mexico, on account of the Mexican fruit fly.

Five-leafed pines, Ribes, and Grossularia.—Quarantine No. 7, as amended: Prohibits the importation from each and every country of Europe and Asia, and from the Dominion of Canada and Newfoundland, of all five-leafed pines and all species and varieties of the genera *Ribes* and *Grossularia*, on account of the white-pine blister rust.

Cotton seed and cottonseed hulls.—Quarantine No. 8, as amended: Prohibits the importation from any foreign locality and country, excepting only the locality of the Imperial Valley, in the State of Lower California, Mexico, of cotton seed (including seed cotton) of all species and varieties, and cottonseed hulls, on account of the pink bollworm. Cotton and cotton seed from the Imperial Valley may be entered under permit and regulation.

Seeds of avocado or alligator pear.—Quarantine No. 12: Prohibits the importation from Mexico and the countries of Central America of the seeds of the avocado or alligator pear, on account of the avocado weevil.

Sugar cane.—Quarantine No. 15: Prohibits the importation from all foreign countries of living canes of sugar cane, or cuttings or parts thereof, on account of certain injurious insects and fungous diseases. There are no restrictions on the entry of such materials into Hawaii and Porto Rico.

Citrus nursery stock.—Quarantine No. 19: Prohibits the importation from all foreign localities and countries of all citrus nursery stock, including buds, scions, and seeds, on account of the citrus canker and other dangerous citrus diseases. The term "citrus," as used in this quarantine, includes all plants belonging to the subfamily or tribe *Citratæ*.

European pines.—Quarantine No. 20: Prohibits, on account of the European pineshoot moth (*Evetria buoliana*), the importation from all European countries and localities of all pines not already excluded by Quarantine No. 7.

Indian corn or maize and related plants.—Quarantine No. 24, as amended: Prohibits the importation from southeastern Asia (including India, Siam, Indo-China, and China), Malayan Archipelago, Australia, New Zealand, Oceania, Philippine Islands, Formosa, Japan, and adjacent islands in the raw or unmanufactured state of seed and all other portions of Indian corn or maize (*Zea mays* L.), and the closely related plants, including all species of Teosinte (*Euchlaena*), Job's tears (*Coix*), *Polytoca*, *Chionachne*, and *Sclerachne*, on account of the downy mildews and *Physoderma* diseases of Indian corn, except that Indian corn or maize may be imported on compliance with the conditions prescribed in the regulations of the Secretary of Agriculture.

Citrus fruit.—Quarantine No. 28: Prohibits the importation from eastern and southeastern Asia (including India, Siam, Indo-China, and China), the Malayan Archipelago, the Philippine Islands, Oceania (except Australia, Tasmania, and New Zealand), Japan (including Formosa and other islands adjacent to Japan), and the Union of South Africa, of all species and varieties of citrus fruits, on account of citrus canker, except that oranges of the mandarin class (including satsuma and tangerine varieties) may be imported on compliance with the conditions prescribed in the regulations of the Secretary of Agriculture.

Sweet potato and yam.—Quarantine No. 29: Prohibits the importation for any purpose of any variety of sweet potatoes or yams (*Ipomoea batatas* and *Dioscorea* spp.) from all foreign countries and localities, on account of the sweet potato weevils (*Cylas* spp.) and the sweet potato scarabee (*Euscepes batatae*).

Banana plants.—Quarantine No. 31: Prohibits the importation for any purpose of any species or variety of banana plants (*Musa* spp.), from all foreign

countries and localities, on account of the banana root borer (*Cosmopolites sordidus*).

Bamboo.—Quarantine No. 34; Prohibits the importation for any purpose of any variety of bamboo seed, plants, or cuttings thereof capable of propagation, including all genera and species of the tribe *Bambuseae*, from all foreign countries and localities, on account of dangerous plant diseases, including the bamboo smut (*Ustilago shiraiana*). This quarantine order does not apply to bamboo timber consisting of the mature dried culms or canes which are imported for fishing rods, furniture making, or other purposes, or to any kind of article manufactured from bamboo, or to bamboo shoots cooked or otherwise preserved.

Nursery stock, plants, and seeds.—Quarantine No. 37, with regulations (effective on and after June 1, 1919): Prohibits the importation of nursery stock and other plants and seeds from all foreign countries and localities on account of certain injurious insects and fungous diseases, except as provided in the regulations. Under this quarantine the following plants and plant products may be imported without restriction: Fruits, vegetables, cereals, and other plant products imported for medicinal, food, or manufacturing purposes, and field, vegetable, and flower seeds. The entry of the following plants for propagation is permitted under restriction: Lily bulbs, lily of the valley, narcissus, hyacinths, tulips, and crocus; stocks, cuttings, scions, and buds of fruits; rose stocks, including manetti, multiflora, brier rose, and rosa rugosa; nuts, including palm seeds; seeds of fruit, forest, ornamental, and shade trees, seeds of deciduous and evergreen ornamental shrubs, and seeds of hardy perennial plants.

OTHER RESTRICTIVE ORDERS.

The regulation of the entry of nursery stock from foreign countries into the United States was specifically provided for in the plant-quarantine act. The act further provides for the similar regulation of any other class of plants or plant products when the need therefor shall be determined. The entry of the plants and plant products listed below has been brought under such regulation:

Nursery stock.—Nursery stock is entered under regulations requiring a permit, foreign certification and marking, reporting arrival and distribution, and inspection at destination. The term "nursery stock" includes all field-grown florists' stock, trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits and other seeds of fruit and ornamental trees or shrubs, and other plants and plant products for propagation, except field, vegetable, and flower seeds, bedding plants, and other herbaceous plants, bulbs, and roots. (These regulations will remain in force until June 1, 1919. See Quarantine No. 37.)

Irish potatoes.—The importation of Irish potatoes is prohibited altogether from the countries enumerated in the potato quarantine. Potatoes may be admitted from other foreign countries in accordance with the order of December 22, 1913, bringing the entry of potatoes under restriction on account of injurious potato diseases and insect pests. The following countries have qualified for the importation of potatoes under the regulations issued under said order: Denmark, Holland, Belgium, Cuba, Bermuda, and the Dominion of Canada. The regulations issued under this order have been amended so as to permit, free of any restrictions whatsoever under the plant-quarantine act, the importation of potatoes from any foreign country into the Territories of Porto Rico and Hawaii for local use only and from the Dominion of Canada and Bermuda into the United States or any of its Territories or Districts.

Avocado, or alligator pear.—The order of February 27, 1914, prohibits the importation from Mexico and the countries of Central America of the fruits of the avocado, or alligator pear, except under permit and in accordance with the other provisions of the regulations issued under said order, on account of the avocado weevil. Entry is permitted only through the port of New York and is limited to the large, thick-skinned variety of the avocado. The importation of the small, purple, thin-skinned variety of the fruit of the avocado and of avocado nursery stock under 18 months of age is prohibited.

Cotton.—The order of April 27, 1915, prohibits the importation of cotton from all foreign countries and localities, except under permit and in accordance with the other provisions of the regulations issued under said order, on account of injurious insects, including the pink bollworm. These regulations apply in part to cotton grown in and imported from the Imperial Valley, in the State of Lower California, in Mexico.

Corn.—The order of March 1, 1917 (Amendment No. 1, with Regulations, to Notice of Quarantine No. 24), prohibits the importation of Indian corn or maize in the raw or unmanufactured state from the countries and localities listed in Notice of Quarantine No. 24, except under permit and in accordance with the other provisions of the regulations issued under said order, on account of injurious diseases of Indian corn.

Cottonseed products.—The order of June 23, 1917, prohibits the importation of cottonseed cake, meal, and all other cottonseed products, except oil, from all foreign countries, and a second order of June 23, 1917, prohibits the importation of cottonseed oil from Mexico except under permit and in accordance with the other provisions of the regulations issued under said orders, on account of injurious insects, including the pink bollworm.

Citrus fruits.—The order of June 27, 1917 (Notice of Quarantine No. 28, with Regulations), prohibits the importation from the countries and localities listed therein of all species and varieties of citrus fruits, excepting only oranges of the mandarin class (including satsuma and tangerine varieties), on account of the citrus-canker disease. Oranges of the mandarin class (including satsuma and tangerine varieties) may be imported under permit and in accordance with the other provisions of the regulations issued under said order.

WASHINGTON : GOVERNMENT PRINTING OFFICE : 1919